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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,934	11/09/2001	Chojiro Kuriyama	10921.90USD1	4795

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Attention of Douglas P. Mueller
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EXAMINER	
NGUYEN, HA T	
ART UNIT	PAPER NUMBER
2812	

DATE MAILED: 07/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/008,934	Applicant(s) KURIYAMA, CHOJIRO	
	Examiner Ha T. Nguyen	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Notice to applicant

1. Applicant's Amendment and Response to the Office Action mailed 2-26-3 has been entered and made of record (Paper No. 8).

Response to Amendment

2. Applicant' s cancellation of claims 19-27 in Paper No. 8 is acknowledged.

In view of Applicant' s amendment to the claims, the objection to claims 1-11, for informality has been withdrawn.

In view of Applicant' s arguments and the amendment to the claims, the rejections of claims under 35 U.S.C. 102 or 103, as stated in Paper No. 7, has been withdrawn.

The response to Applicant' s arguments will be incorporated in the new ground of rejection given below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable by Ikeda et al. (U. S. Patent 4876451 "Ikeda").

[Claim 1] Referring to Figs. 15(a)-25 and related text, Uemura discloses a solid electrolytic capacitor comprising: a capacitor element 60 or 70 having a first, right portion (considered anode) (see Figs. 23 and 25) and a second, left portion (considered cathode) ; a base sheet member746 or 76' made of resin, the base sheet member having an obverse surface for mounting the capacitor element and a reverse surface opposite to the obverse surface; a protection package 75 formed on the obverse surface of the sheet member to enclose the

capacitor element, the package having a first side surface adjacent to the anode of the capacitor element and a second side surface opposite to the first side surface; a conductive outer anode layer 32 electrically connected to the anode of the capacitor element; and a conductive outer cathode layer 77 electrically connected to the cathode of the capacitor element, the outer cathode layer being spaced from the cathode of the capacitor element with the base sheet member positioned therebetween; wherein the outer anode layer 72 is formed on at least one of the package and the sheet member, the outer cathode layer being formed on the reverse surface of the sheet member (see Fig. 25 and col. 13, line 44-col. 15, line 11). But it does not disclose expressly which one of the two portions is the cathode. However, it would have been obvious for a person of ordinary skill in the art to connect the anode and cathode leads to the appropriate portions of the capacitor element and the corresponding outer layers which are appropriately patterned to fit the design of a specific application.

[Claim 2] further comprising an upper sheet member 26 for shielding the capacitor element, the capacitor element being arranged between the base sheet member and the upper sheet member (see Figs. 17, 18 (a, b));

[Claim 4] wherein the outer anode layer is formed on at least one of the first side surface of the package and the reverse surface of the base sheet member, the outer cathode layer extending onto the second side surface of the package (see Fig. 25);

[Claim 5] wherein the anode is exposed at the first side surface of the package to come into contact (electrically) with the outer anode layer (see Figs. 24 and 25);

[Claim 6] further comprising a metal piece 71 attached to the anode of the capacitor element, the metal piece being exposed at the first side surface of the package to come into contact (electrically) with the outer anode layer (see Fig. 25).

Therefore, it would have been obvious to use Ikeda's teaching to obtain the invention as specified in claims 1, 2, and 4-6.

5. Claims 1, 2, 4-9, and 11 are rejected under 35 U.S.C. 102(b) as being unpatentable over the combination of Uemura (U. S. Patent 4497105) and Ikeda.

[Claim 1] Referring to Figs. 1a-9 and related text, Uemura discloses a solid electrolytic capacitor comprising: a capacitor element 12 having an anode (see Fig. 8, upper

portion with a projection) and a cathode (lower portion); a base sheet member 22 having an obverse surface for mounting the capacitor element and a reverse surface opposite to the obverse surface; a protection package 44 formed on the obverse surface of the sheet member to enclose the capacitor element, the package having a first side surface adjacent to the anode of the capacitor element and a second side surface opposite to the first side surface; a conductive outer anode layer 32 electrically connected to the anode of the capacitor element; and a conductive outer cathode layer 32 electrically connected to the cathode of the capacitor element; wherein the outer anode layer is formed on at least one of the package and the sheet member, the outer cathode layer being formed on at least one of the package and the sheet member. But it does not disclose expressly that the base sheet member is made of resin and the outer cathode layer being spaced from the cathode of the capacitor element with the base sheet member positioned therebetween. However, the missing limitations are well known in the art because Ikeda discloses these features, as shown above. A person of ordinary skill is motivated to modify Uemura with Ikeda by having a base sheet composed of a lamination of the layer 22 of Uemura with the insulation sheet 76' of Ikeda to obtain small-sized capacitor mountable on circuit board.

[Claim 2] Uemura also discloses that the capacitor further comprising an upper sheet member 42 for shielding the capacitor element, the capacitor element being arranged between the base sheet member and the upper sheet member (see Fig. 8);

[Claim 4] The combined teaching of Uemura and Ikeda also discloses wherein the outer anode layer is formed on at least one of the first side surface of the package and the reverse surface of the base sheet member, the outer cathode layer extending onto the second side surface of the package, as shown above;

[Claim 5] Uemura also discloses wherein the anode is exposed at the first side surface of the package to come into contact with the outer anode layer (see Fig. 8);

[Claim 6] further comprising a metal piece 18 attached to the anode of the capacitor element, the metal piece being exposed at the first side surface of the package to come into contact with the outer anode layer (see Figs. 6a and 8);

[Claim 7] further comprising a metal piece attached to the anode of the capacitor element and an anode connection layer 36 formed on the obverse surface of the base sheet member, the anode connection layer being connected to the metal piece and exposed at the first side surface of

the package to come into contact with the outer anode layer (see Fig. 6a); [Claim 5] wherein the anode is exposed at the first side surface of the package to come into contact w[Claim 7] further comprising a metal piece attached to the anode of the capacitor element and an anode connection layer formed on the obverse surface of the base sheet member, the anode connection layer being connected to the metal piece and exposed at the first side surface of the package to come into contact with the outer anode layer (see Fig. 6a);

[Claim 8] further comprising a metal piece attached to the anode of the capacitor element and an anode connection layer 36 formed on the obverse surface of the base sheet member, the metal piece being connected to the anode connection layer, the base sheet member being formed with a through-hole for connecting the anode connection layer to the outer anode layer (see Figs. 5c and 6a);

[Claim 9] further comprising a cathode connection layer 36 formed on the obverse surface of the base sheet member and connected to the cathode of the capacitor element, the cathode connection layer being exposed at the second side surface of the package to come into contact with the outer cathode layer (see Fig. 5c); and

[Claim 11]] further comprising a cathode connection layer 36 formed on the obverse surface of the base sheet member and connected to the cathode of the capacitor element, the base sheet member being formed with a through-hole 26 for connecting the cathode connection layer to the outer cathode layer (see Fig. 5c).

Therefore, it would have been obvious to combine Uemura with Ikeda to obtain the invention as specified in claims 1, 2, 4-9, and 11.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda or the combination of Ikeda and Uemura in view of Su (U.S. Patent 4814946).

Ikeda or the combination of Ikeda and Uemura discloses substantially the limitations of claim 3, as shown above.

But Ikeda or the combination of Ikeda and Uemura does not disclose expressly wherein the package is formed with an at least partially slanted portion .

However, the missing limitation is well known in the art because Su discloses this feature (see Fig. 3).

A person of ordinary skill is motivated to modify Ikeda or Ikeda and Uemura with Su to clearly make the distinction in appearance between the two ends of the capacitor avoiding error in connection when the capacitor is used .

Therefore, it would have been obvious to combine Ikeda or Ikeda and Uemura with Su to obtain the invention as specified in claim 3.

7. Claim10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda or the combination of Ikeda and Uemura in view of Hasegawa et al. (U.S. Patent 5390074, hereinafter "Hasegawa").

Ikeda or the combination of Ikeda and Uemura discloses substantially the limitations of claim 10, as shown above.

But it does not disclose expressly a cathode bump arranged on the cathode of the capacitor element, the cathode bump being exposed at the second side surface of the package to come into contact with the outer cathode layer.

However, the missing limitation is well known in the art because Hasegawa discloses this feature (see Fig. 1, #19).

A person of ordinary skill is motivated to modify Ikeda or the combination of Ikeda and Uemura with Hasegawa to obtain a well centered capacitor ensuring a good protection of the capacitor element.

Therefore, it would have been obvious to combine Ikeda or the combination of Ikeda and Uemura with Hasegawa to obtain the invention as specified in claim 10.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha Nguyen whose telephone number is (703)308-2706 . The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM, except the first Friday of each bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached on (703) 308-3325. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Ha Nguyen
Primary Examiner
07-11 - 03